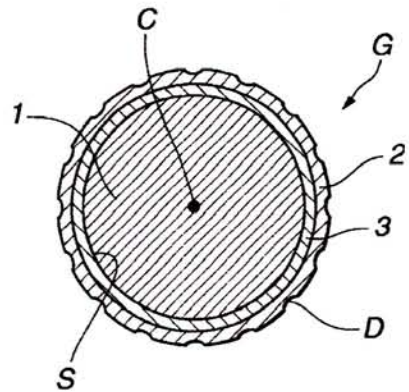


PART 2 OF 2

4. The '791 Patent

The '791 Patent (Ex. D) is directed to a multilayer golf ball with a rubbery elastic core (1), a cover (2), and at least one intermediate layer (3) between the core and the cover. The intermediate layer (3) is made of a resin material that is harder than the cover (2), and the elastic core (1) has a hardness which increases from the center (C) to the surface (S). The hardness increase may be gradual, and the difference in JIS-C



hardness between the center (C) and surface (S) is at least 22. Ex. D, col. 1:64 – 2:11. The resultant ball has improved distance, without diminishing controllability and feel. *Id.*, col. 1:31-35.

Bridgestone asserts claims 11 (dependent from 1), 13, 16, and 26 (dependent from 24) of the '791 Patent. The parties disagree about the proper construction of the terms in claims 1, 13, and 24 emphasized below:

<u>Claim 1</u>	<u>Claim 13</u>	<u>Claim 24</u>
1. A golf ball comprising a rubbery elastic core having a center and a radially outer surface, a cover having a plurality of dimples on the surface thereof, and at least one intermediate layer situated between the core and the cover; wherein ... said elastic core has a hardness which <u>gradually increases</u> radially outward from the center to the surface thereof, and a difference in JIS-C hardness of at least 22 between the center and the surface.	13. A golf ball comprising a rubbery elastic core having a center and a radially outer surface, a cover having a plurality of dimples on the surface thereof, and at least one intermediate layer situated between the core and the cover; wherein ... said elastic core has a hardness at the center and <u>a hardness at the surface thereof which is greater than the hardness at the center thereof</u> , and a difference in JIS-C hardness of at least 22 between the center and the surface.	24. A golf ball comprising a rubbery elastic core having a center and a radially outer surface, a cover having a plurality of dimples on the surface thereof, and at least one intermediate layer situated between the core and the cover; wherein ... said elastic core has <u>a hardness at the center and a hardness at the surface thereof which is greater than the hardness at the center thereof</u> , and a difference in JIS-C hardness of at least 22 between the center and the surface.

a. “Gradually Increases”

Bridgestone proposes that the term “gradually increases” that appears only in claim 1 be afforded its plain and ordinary meaning, because no special definition of this term has been advanced in the '791 Patent's claims, specification or prosecution history. The meaning of “gradually increases” is

apparent on its face, and is readily understood by someone of ordinary skill in the art. For the Court's benefit, Bridgestone cites exemplary dictionary definitions of "gradually" as "proceeding by steps or degrees," and of "increases" as "to become progressively greater (as in size, amount, number, or intensity)." Exs. L, M. Nothing in the intrinsic evidence dictates that this language be construed inconsistent with its plain and ordinary meaning.

In contrast, Acushnet's proposed construction – "[h]aving a slope which increases and is not steep or abrupt" – is inconsistent with, and unsupported by, the intrinsic evidence.

First, claim 1 recites simply that the core "has a hardness which gradually increases radially outward from the center to the surface thereof." Neither claim 1 nor any claim dependent therefrom further defines "gradually increases," let alone provides support for Acushnet's proposed construction.

Second, several sections of the specification refer to a core hardness that "gradually increases." Each of these sections utilizes the claimed term – "gradually increases" – without indicating that it means anything different from its plain and ordinary meaning. *See, e.g.*, Ex. D, col. 1:41-43; col. 2:7-8; and col. 3:26-28. For example, the specification teaches that a core hardness that "gradually increases" includes embodiments where "the core has a higher hardness at the surface than at the center." Ex. D, col. 3:26-28. However, no reading of the specification of the '791 Patent indicates that "gradually increasing" is somehow equivalent to "a slope which increases and is not steep or abrupt," as Acushnet alleges.

In fact, Acushnet's definition includes a requirement that is neither disclosed nor suggested by any of the intrinsic record – that of having a "slope which increases." "Slope" is generally understood to be "a ratio of a rise divided by a run between points on a line," *e.g.*,

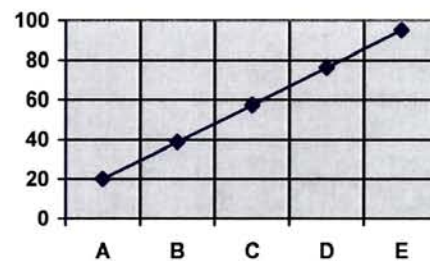


FIG. 3 – Constant Slope

the “slope” of a hill is how steep it is. Ex. N. A constant slope provides a generally straight line (e.g., FIG. 3), while an increasing slope, as Acushnet argues, provides an upwardly curving line, which gets steeper (e.g., FIG. 4). Acushnet’s proposed construction of “gradually increases” as “a slope which increases and is not steep or abrupt” would have the absurd result of excluding the profile of FIG. 4 – a result that is entirely inconsistent with the ‘791 Patent.

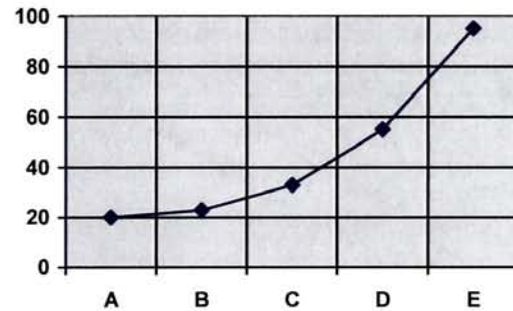


FIG. 4 – Increasing Slope

Third, in the prosecution history, the inventor only discussed the term “gradually increases” in the January 29, 2003 Amendment, where he distinguished it from U.S. Patent No. 5,803,833 by pointing out that U.S. Patent No. 5,803,833 “teaches that from 4 mm from the core’s surface to 2 mm from the core’s surface, the hardness actually decreases” (Ex. O, pp. 7-8 (emphasis original)) – in other words, that U.S. Patent No. 5,803,833 discloses a fluctuating hardness gradient. This argument fails to provide any support for Acushnet’s proposed construction, as it describes nothing with respect to any “increasing slope” of hardness.

Thus, Acushnet’s proffered construction is inconsistent with the intrinsic evidence related to the ‘791 Patent. Because the intrinsic evidence does not afford any special meaning to the term “gradually increases,” this term should be afforded its plain and ordinary meaning.

b. “A Hardness At The Center And A Hardness At The Surface Thereof Which Is Greater Than The Hardness At The Center Thereof.”

Bridgestone proposes that the language “a hardness at the center and a hardness at the surface thereof which is greater than the hardness at the center thereof” (found in independent claims 13 and 24) be afforded its plain and ordinary meaning. Bridgestone believes that the meaning of this term is

plainly apparent on its face, and that no portion of the claims, specification or prosecution history of the ‘791 Patent provides any further definition inconsistent with such a plain and ordinary meaning.

In contrast, Acushnet’s proposed construction is “‘a hardness at the center and a hardness at the surface thereof which is greater than the hardness at the center thereof, which gradually increases radially outward,’ where ‘gradually increases’ means ‘having a slope which increases and is not steep or abrupt’” (emphasis added). Thus, Acushnet seeks to re-define claims 13 and 24 to include limitations found in the specification and in claim 1’s recitation that the core hardness “gradually increases radially outward.” This proposed construction is inconsistent with the claims, specification, and prosecution history of the ‘791 Patent.

Claims 13 and 24 recite only that the “elastic core has a hardness at the center and a hardness at the surface thereof which is greater than the hardness at the center thereof, and a difference in JIS-C hardness of at least 22 between the center and the surface.” Claim interpretation begins and ends with the claim itself. *W.E. Hall Co.*, 370 F.3d at 1353. This term is clear on its face.

Although exemplary embodiments of the specification discuss a core hardness that “gradually increases,” “it is improper to read limitations from a preferred embodiment described in the specification – even if it is the only embodiment – into the claims absent a clear indication in the intrinsic record that the patentee intended the claims to be so limited.” *Liebel-Flarsheim Co. v. Medrad, Inc.*, 358 F.3d 898, 913 (Fed. Cir. 2004) (internal citations omitted). In this instance, Acushnet is attempting to do exactly what is proscribed by the Federal Circuit – import the term “gradually increasing” from exemplary embodiments of the ‘791 Patent into claims 13 and 24.

Furthermore, claims 13 and 24 differ from claim 1, which specifies that the “elastic core has a hardness which gradually increases radially outward from the center to the surface thereof, and a difference in JIS-C hardness of at least 22 between the center and the surface.” In other words, claims 13 and 24 do not include recitations that the hardness of the elastic core “gradually increases radially outward.”

As a result, Acushnet's proposed construction would result in independent claims 1 and 24 being of the same scope. Such a result is disfavored by the Federal Circuit, because there is a "presumption that each claim in a patent has a different scope." *Curtiss-Wright Flow Control Corp. v. Velan, Inc.*, 438 F.3d 1374, 1380 (Fed. Cir. 2006).

The language "a hardness at the center and a hardness at the surface thereof which is greater than the hardness at the center thereof" should be construed according to its plain and ordinary meaning, and not as Acushnet alleges to require a "gradual increase" in hardness.

5. The '961 Patent

a. General Description Of The '961 Patented Invention

The '961 Patent concerns a chemical formulation of a golf ball core. Specifically, the inventors discovered that a synergistic effect is provided in a solid-core golf ball having a core, an inner cover layer, and an outer cover layer, when: (1) the core is made of a rubber composition formulated from a particular type of base rubber combined in specific proportions with certain other materials; and (2) the outer cover layer is softer than the inner cover layer. Golf balls made according to the '961 Patent have a good, soft feel when hit with a golf club, and excellent spin performance. Ex. E, col. 1:65-col. 2:54.

b. Claim Construction Issues

Bridgestone asserts claim 2 of the '961 Patent, which depends from claim 1. The parties disagree about the proper construction of the following emphasized language in these claims:

1. A multi-piece solid golf ball comprising a solid core, an inner cover layer and an outer cover layer, wherein the solid core is molded from a rubber composition comprising 100 parts by weight of a base rubber composed of (a) 20 to 100 wt % of a polybutadiene having a cis-1,4 content of at least 60% and a 1,2 vinyl content of at most 2%, having a viscosity η at 25°C as a 5 wt % solution in toluene of up to 600 mPa·s, being synthesized using a rare-earth catalyst and satisfying the relationship: $10B+5 \leq A \leq 10B+60$, wherein A is the Mooney viscosity (ML_{1+4} (100°C)) of the polybutadiene and B is the ratio M_w/M_n between the weight-average molecular weight M_w and the number-average molecular weight M_n of the polybutadiene, in combination with (b) 0 to 80 wt % of a diene rubber other than component (a), (c) 10 to 60 parts by weight of an unsaturated carboxylic acid or a metal salt thereof or both, (d) 0.1 to 5 parts by weight of an organosulfur compound, (e) 5 to 80

parts by weight of an inorganic filler, (f) 0.1 to 5 parts by weight of an organic peroxide; the inner cover layer has a Shore D hardness of 50 to 80; the outer cover layer has a Shore D hardness of 35 to 60; and the outer cover layer has a lower Shore D hardness than the inner cover layer.

2. The golf ball of claim 1, wherein the diene rubber (b) includes 30 to 100 wt % of a second polybutadiene which has a cis-1,4 content of at least 60% and a 1,2 vinyl content of at most 5%, has a Mooney viscosity (ML_{1+4} (100° C)) of not more than 55, and satisfies the relationship: $\eta \leq 20A-550$, wherein A is the Mooney viscosity (ML_{1+4} (100° C)) of the second polybutadiene and η is the viscosity of the second polybutadiene, in mPa·s, at 25°C as a 5 wt % solution in toluene.

(i) **“having a viscosity η at 25°C as a 5 wt % solution in toluene of up to 600 mPa·s”**

Bridgestone proposes that this term be afforded its plain and ordinary meaning, because no special definition of this term has been advanced in the intrinsic evidence related to the ‘961 Patent. The language is simple, straightforward, and known to someone of ordinary skill in the art. Thus, it requires no further interpretation.

In contrast, Acushnet proposes that this term be construed as:

[having a viscosity η of 600 milli Pascal seconds or less. The viscosity being defined by the specification of the ‘961 Patent to be measured ‘in mPa·s units’ and being ‘obtained by dissolving 2.28g of the polybutadiene to be measured in 50 ml of toluene and carrying out measurement with a specified viscometer at 25°C using a standard solution for the viscometer (JIS Z8809).

Acushnet improperly seeks to import limitations of an exemplary embodiment of the ‘961 Patent (*see* Ex. E, col. 3:5-13) into this claim term. *Liebel-Flarsheim*, 358 F.3d at 913. Acushnet’s proposed construction is improper and unnecessary.

First, claim 1 simply recites “having a viscosity η at 25°C as a 5 wt % solution in toluene of up to 600 mPa·s.” This term is clear and definite. The language provides sufficient information necessary to measure “viscosity.” Additional details from the specification are not required.

Second, the ‘961 Patent specification discusses an exemplary embodiment for measuring viscosity with toluene as a solvent, where:

“Viscosity η at 25°C as a 5 wt % solution in toluene” refers herein to the value in mPa·s units obtained by dissolving 2.28 g of the polybutadiene to be measured in 50 ml of toluene and carrying out measurement with a specified viscometer at 25°C using a standard solution for the viscometer (JIS Z8809).

Ex. E, col. 3:5-13.

However, there is no indication in the specification of the ‘961 Patent that this particular exemplary method of measuring viscosity measurement is somehow necessary to the claimed invention of the ‘961 Patent. In fact, the particular parameters specified in the exemplary embodiment (e.g., “dissolving 2.28 g of the polybutadiene to be measured in 50 ml of toluene”) are freely modifiable. Thus, Acushnet’s proposed construction is improper.

- (ii) **“base rubber composed of (a) 20 to 100 wt % of a polybutadiene... satisfying the relationship: $10B+5 \leq A \leq 10B+60$, wherein A is the Mooney viscosity(ML_{1+4} (100°C)) of the polybutadiene and B is the ratio M_w/M_n between the weight-average molecular weight M_w and the number-average molecular weight M_n of the polybutadiene”**

Bridgestone proposes that this term be afforded its plain and ordinary meaning, because no special definition has been advanced in intrinsic evidence related to the ‘961 Patent. The language is simple, straightforward, and known to someone of ordinary skill in the art. Thus, it requires no further interpretation.

In contrast, Acushnet proposes that this term be construed as:

[t]he base rubber composed of (a) 20 to 100 wt % of a polybutadiene that has the relationship: 10 times the polydispersity plus 5 is less than or equal to the Mooney viscosity which is less than or equal to 10 times the polydispersity plus 60. The term polydispersity means the ratio of the weight average molecular weight (M_w) to the number average molecular weight (M_n). As defined in the specification, “M” in the term (ML_{1+4} (100°C)) stands for Mooney viscosity, “L” stands for large rotor..., “1+4” stands for a preheating time of 1 minute and a rotor rotation time of 4 minutes, and “100°C” indicates that the measurement was carried out at a temperature of 100°C.

(emphasis added). However, Acushnet's proposed construction is improper and unnecessary.

Claim 1 of the '961 Patent is clear on its face, and recites the simple equation (" $10B+5<A<10B+60$ ") utilizing variables A ("Mooney viscosity") and B ("the ratio M_w/M_n ") – both of which are defined in the claim itself and are easily understood in the context of the intrinsic record. Nevertheless, Acushnet seeks to redefine the clear language of claim 1 in two ways. First, Acushnet seeks to rewrite the simple mathematical symbols used in claim 1, such as "+" and "<," with word descriptions, such as "plus" and "less than." These changes are unnecessary, because the simple mathematical symbols are easily understood, and only make the definition more confusing than the term itself. Second, Acushnet seeks to redefine the claim term "the ratio M_w/M_n " as "polydispersity." "Polydispersity" is not discussed in the '961 Patent and is not believed to be technically correct.⁵ Thus, there is no reason to add it in this instance – particularly because "the ratio M_w/M_n " is clear on its face.

The specification of the '961 Patent defines the term "M" for Mooney viscosity consistent with the definition known by one of ordinary skill in the art. Ex. E, col. 3:46-54. A skilled artisan would know that "M" in the term (ML_{1+4} (100°C)) "stands for Mooney viscosity," "L" stands for large rotor..., '1+4' stands for a preheating time of 1 minute and a rotor rotation time of 4 minutes, and "100°C" indicates that the measurement was carried out at a temperature of 100°C." As a skilled artisan would know this definition from the '961 Patent, adding this portion into the definition is unnecessary.

In view of the above, Acushnet's proposed construction should be rejected.

**(iii) " (b) 0 to 80 wt % of a diene rubber
other than component (a) "**

Bridgestone proposes that this term be afforded its plain and ordinary meaning, because no special definition of this term has been advanced in the intrinsic evidence related to the '961 Patent. The language is simple, straightforward, and known to someone of ordinary skill in the art. Thus, it requires no further interpretation.

⁵ The term "polydispersity index" is currently known in the art. Ex. P.

In contrast, Acushnet's proposed construction is "[a] diene rubber, different from diene rubber (a), that if present, is present in an amount not more than 80% by weight of the total rubber composition." Such paraphrasing of this term is improper and unnecessary.

Claim recites "(b) 0 to 80 wt % of a diene rubber other than component (a)." This recitation is clear and definite, and does not require interpretation or need to be rephrased to be understood.

The specification of the '961 Patent is also consistent with Bridgestone's construction, and not Acushnet's. The specification indicates, for example, that:

[i]n addition to component (a), the base rubber may include also a diene rubber (b) insofar as the objects of the invention are attainable. Specific examples of the diene rubbers (b) include polybutadiene rubber, styrene-butadiene rubber (SBR), natural rubber, polyisoprene rubber, and ethylene-propylene-diene rubber (EPDM). Any one or combination of two or more thereof may be used.

The diene rubber (b) is included together with component (a) in the base rubber in an amount of at least 0 wt %, preferably at least 10 wt %, more preferably at least 20 wt %, and most preferably at least 30 wt %, but not more than 80 wt %, preferably not more than 75 wt %, more preferably not more than 70 wt %, and most preferably not more than 65 wt %.

Ex. E, col. 5:54-col. 6:67 (emphasis added).

Acushnet seeks to complicate this term by paraphrasing it, which is unnecessary as the plain and ordinary meaning of the term "(b) 0 to 80 wt % of a diene rubber other than component (a)" is clear. There is no reason to reword this language.

- (iv) "which has a cis-1,4 content of at least 60% and a 1,2 vinyl content of at most 5%, has a Mooney viscosity (ML1+4 (100° C)) of not more than 55, and satisfies the relationship: $\eta < 20A - 550$, wherein A is the Mooney viscosity (ML1+4 (100° C)) of the second polybutadiene and η is the viscosity of the second polybutadiene, in mPa·s, at 25°C as a 5 wt % solution in toluene."

Bridgestone proposes that this term in claim 2 be afforded its plain and ordinary meaning, as no special definition of this term has been advanced in the intrinsic evidence related to the '961 Patent.

The language is simple, straightforward, and known to someone of ordinary skill in the art. Thus, it requires no further interpretation.

Acushnet agrees that the plain meaning applies, but seeks to add to that meaning, proposing that this term be defined as:

plain meaning, with the further understanding that the specification defines 'M' in the term (ML₁₊₄ (100°C)) as 'Mooney viscosity,' 'L' stands for large rotor..., '1+4' stands for a preheating time of 1 minute and a rotor rotation time of 4 minutes and '100°C' indicates that the measurement was carried out at a temperature of 100°C.

First, there is no need for the additional proposed language as the term is clear and definite when read in the context of claims 1 and 2.

Second, in the same manner as the construction of the term containing the term "Mooney viscosity (ML₁₊₄ (100°C))" in claim 1, the specification of the '961 Patent defines the term "M" for Mooney viscosity, consistent with the definition known by one of ordinary skill in the art. Ex. E, col. 3:46-54. Thus, as a skilled artisan would know that "M" in the term (ML₁₊₄ (100°C)) "stands for Mooney viscosity," "'L' stands for large rotor..., '1+4' stands for a preheating time of 1 minute and a rotor rotation time of 4 minutes, and "100°C" indicates that the measurement was carried out at a temperature of 100°C," adding this portion into the definition is unnecessary.

C. THE ACUSHNET PATENTS-IN-SUIT AND CLAIM CONSTRUCTION ISSUES

Acushnet alleges that Bridgestone infringes four patents. Three of the Acushnet patents-in-suit (the '861, '587 and '367 Patents) stem from the same parent application, and are directed to the same subject matter – a specific spatial arrangement of dimples on the surface of a golf ball. The fourth Acushnet patent (the '705 Patent) is directed toward the ingredients used in a core of a solid ball.

1. The '861, '587 and '367 Patents

a. General Description of the Subject Matter of the '861, '587 and '367 Patents

Because these patents are related to each other, and because their specifications are the same, the following discussion applies equally to each of these patents. For the purposes of this discussion, the term “Dimple Patents” refers to the '861, '587 and '367 Patents collectively.⁶

The Dimple Patents are directed to the placement of dimples on the surface of a golf ball, and specifically to controlling the “spatial relationships of the dimples.” Ex. G, col. 1:30-36. The Dimple Patents describe this spatial relationship between the dimples as “critical” and allege that a benefit is obtained when “at least about 80% of the distances between the closest points of the edges of adjacent dimples must be less than about 0.065 inches and at least about 55% of the distances between the closest points of the edges of adjacent dimples must be greater than about 0.001 inches.” *Id.* at col. 2:12-18. The Dimple Patents also allege another advantage in controlling the depth to diameter ratio of the dimples with the following equation:

$$s = \left[\frac{831.5(d-x) - 55.56(D-y)}{a} \right]^2 + \left[\frac{83.15(D-y) + 555.6(d-x)}{b} \right]^2$$

Id. at col. 2:19-37.

Two terms remain disputed, one of which is common to each of the Dimple Patents, and is discussed first. The other is related only to the '861 Patent, and is discussed second.⁷

b. Common Claim Construction Issue – “edge”

The parties disagree about the proper construction of “edge” recited in each of the '861, '587 and '367 Patents. Representative language from claim 1 of the '587 Patent, with the disputed term emphasized, is as follows:

⁶ The '861 patent claims are directed to a method of making a golf ball, but the general discussion regarding the subject matter equally applies to each of the patents.

⁷ Acushnet has asserted claim 1 of the '861 patent, claims 1 and 26 of the '587 patent, and claims 1 and 3 of the '367 patent.

1. A finished golf ball which has from 182 to 392 dimples in the outer periphery thereof, the placement of the dimples being such that at least 80% of the distances between the closest points of the edges of adjacent dimples is less than 0.065 inches, and at least 55% of the distances between the closest points of the edges of adjacent dimples is greater than 0.001 inches, the edge of the dimple being defined as the point of intersection of the periphery of the golf ball or its continuation and a tangent to the sidewall of the dimple at a point 0.003 inches below the periphery of the golf ball or its continuation, and wherein combinations of the diameter D and depth d of all dimples formed on the ball are defined by the relationship:

Bridgestone proposes that “edge” be construed as “[t]he point of intersection of the periphery of the golf ball or its continuation and a tangent to the sidewall of the dimple at a point 0.003 inches below the periphery of the golf ball or its continuation.” This definition is taken *verbatim* from the claims and specifications of the Dimple Patents.

Acushnet, on the other hand, deletes the words “the point” and proposes that “edge” be construed as “[t]he intersection of the periphery of the golf ball or its continuation and a tangent to the sidewall of the dimple at a point 0.003 inches below the periphery of the golf ball or its continuation.” Acushnet ignores the clear definition set forth in the specification and deletes the words “the point” to change the definition of “edge” from a point to a plane.

Bridgestone’s proposed definition follows the overwhelming authority of case law and first looks to the claims themselves. Within each of the asserted claims the dimple “edge” is set forth as “the point of intersection of the periphery of the golf ball or its continuation and a tangent to the sidewall of the dimple at a point 0.003 inches below the periphery of the golf ball or its continuation.” Ex. F, col. 10:45-50; Ex. G, col. 9:62-66 and col. 13:47-52; and Ex. H, col. 9:66 to col. 10:2 (emphasis added).

The intrinsic evidence is consistent with Bridgestone’s proposed definition. The specification provides the same detailed explanation and definition of dimple “edge.” Figures 3 to 5 are specifically directed to how the dimple “edge” is to be defined and determined. The specifications of each patent states that the “edge of the dimple is defined as that point at which the periphery of the golf ball or its continuation intersects a tangent to the sidewall of the dimple.” Ex. F, col. 6:17-19; Ex. G, col. 5:66-68; and Ex. H, col. 6:3-5 (emphasis added).

Finally, during prosecution of U.S. Application No. 05/236,318 (Ex. Q), the parent application for each of the Dimple Patents, the inventors responded to a rejection by amending the claims to define the dimple “edge.” *Id.* at pp.2-6. The inventors explained this amendment by stating that the “Examiner has stated that the location of the ‘edges’ is not ascertainable from the claims and in accordance therewith the applicants have added to the claims the definition of the edge of the dimple as given in the specification.” *Id.* at p.11.

c. Claim Construction Issue Related to the ‘861 Patent Only

The parties disagree about the proper construction of the following emphasized language from a selected portion of claim 1 of the ‘861 Patent:

1. A method of manufacturing a golf ball having dimples in the outer periphery thereof comprising the steps of:

(A) selecting a golf ball structure onto the surface of which dimples can be molded;

(B) determining the dimple number, dimple diameter and dimple depth by:

(a) selecting the number of dimples to be used, the said number of dimples being between 182 and 392;

(b) selecting a dimple diameter and dimple depth that satisfy the following relationship:

$$s = \left[\frac{831.5(d-x) - 55.56(D-y)}{a} \right]^2 + \left[\frac{83.15(D-y) + 555.6(d-x)}{b} \right]^2$$

in which...

Here, the dispute regards the text of subsections “(a)” and “(b),” of section (B) of this claim. There is no dispute regarding the equation for “S” and the subsequent text.

Bridgestone proposes that this term be construed as “determining the number of dimples to be used selecting the number of dimples to be between 182 and 392 and determining the dimple diameter and depth by selecting the dimple diameter and depth using the relationship.” Here, the intrinsic

evidence requires the steps of selecting and using the claimed relationships to determine the dimples to be formed on a golf ball.

In contrast, Acushnet's proposed construction is "Plain Meaning." Acushnet's attempt to rely on plain meaning with regard to this limitation ignores the intrinsic evidence in both the '861 Patent and its prosecution history.

The claims of the '861 Patent are directed to a method of making a golf ball using the "S" equation and the "critical" spatial relationship as set forth within the patent and the claims. Ex. F, col. 9:56-58 and col. 2:15-22. The inventors stated in their response to the first Office Action that "[a]s recognized by the Examiner, the applicants' claims 'define the method of selecting the number of dimples, the diameter and depth of said dimples, and the subsequent step of placing said dimples on the surface of a golf ball' []. ... In accordance therewith, applicants have herewith amended their claims to the method of selecting and positioning the dimples on a golf ball." Ex. R, p.11 (emphasis in original).

Additionally, in responding to a further Office Action, the inventors of the '861 Patent stated "[t]he critical aspect of the applicants' claimed invention is selecting the dimple number, dimple diameter, dimple depth, and dimple spacing as set forth in subsections (B) and (C) of claims 35 and 40. It is only when the method includes selection of the critical limitations according to these subsections that the advantages of the present invention are achieved." Ex. S. at p.2 (emphasis added).⁸ After an additional rejection, the inventors further amended the method claims to make it clear that subsequent to using the limitations of subsections (B) and (C) of claim 1 to select the number, diameter, depth and placement of the dimples, the method includes "(D) forming the dimples on the surface of the golf ball by molding a golf ball in the mold, [and] (E) removing the formed golf ball from the mold." Ex. T. at pp.4-6. The '861 Patent was then allowed.

Thus, as evidenced in the prosecution history, both subsections (B) and (C) of claim 1 must be used in the claimed method of making a golf ball, before the dimples are formed on the surface of

⁸ The language of subsections "(B)" and "(C)" of claim 35 is identical to the language of '861 patent claim 1.

the golf ball. If this were not the case, the claimed method would merely require the forming of dimples on a ball surface, where the dimple dimensions and spacing were randomly selected, and then later making a determination if the dimple number, diameter, depth and spacing satisfy the “critical” aspects of the alleged invention in the ‘861 Patent.

Additional support for Bridgestone’s proposed construction can be found in the testimony of Mr. Francis deS Lynch, an inventor of the Dimple Patents. Mr. Lynch testified that for the purposes of the alleged invention,

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2. The ‘705 Patent

a. General Description Of The Subject Matter of the ‘705 Patent

The ‘705 Patent concerns the use of particular materials having a “resilience index” of greater than 40 in a core of a golf ball. Ex. I, col. 1:16-28.

b. Claim Construction Issues

Acushnet asserts dependent claim 4, which includes all the limitations of claim 1. The parties disagree about the proper construction of the terms in claim 1 emphasized below:

1. A golf ball comprising: a center comprising a material formed from the conversion reaction of at least a cis-to-trans catalyst and a polybutadiene, wherein the material has a molecular weight of greater than about 200,000 and a resilience index of at least about 40; an inner cover layer; and an outer cover layer disposed about the inner cover layer comprising a polyurethane composition.

- (i) **“a material formed [sic] from the conversion reaction of at least a cis-to-trans catalyst and a polybutadiene”**

Bridgestone’s proposed construction of “a material formed from the conversion reaction of at least a cis-to-trans catalyst and a polybutadiene” is “a cured product formed from the conversion reaction of at least a cis-to-trans catalyst and a polybutadiene.” Thus, Bridgestone seeks to construe the term “a material” as the resulting material following the “conversion reaction” of a cis-to-trans catalyst

and polybutadiene – which is a “a cured product.” This construction is consistent with the intrinsic evidence, as well as admissions made by Acushnet.

First, claim 1 recites that the “material” is formed from a “conversion reaction of at least a cis-to-trans catalyst and a polybutadiene.” There is, however, no plain meaning for the term “conversion reaction,” and the term is not further defined in the claims of the ‘705 Patent. Thus, one of ordinary skill would examine the rest of the intrinsic record to determine a definition for this term.

The specification of the ‘705 Patent describes that a cured product or material is formed from a “conversion reaction”:

[T]he center further includes a material formed from a conversion reaction of polybutadiene having a first amount of trans-polybutadiene, a free radical source, and at least one cis-to-trans catalyst. Preferably, the reaction occurs at a temperature sufficient to form a polybutadiene reaction product having an [sic] second amount of trans-polybutadiene greater than the first amount of trans-polybutadiene.

Ex. I, col. 8:6-13.

This section indicates that the uncured polybutadiene has a small amount of trans-polybutadiene before heating, and after it reacts with the cis-to-trans catalyst through heat (the “conversion reaction”), the end product has a larger amount of trans-polybutadiene. The application of heat cures the rubber to form a cured rubber material as is found in a final golf ball product. Indeed, the specification compares uncured and cured materials to determine whether cis-to-trans isomerization has occurred during a conversion reaction. Ex. I, Tables 3-6.

In addition, during a deposition of Acushnet regarding the preparation and prosecution of the ‘705 patent, Acushnet admitted through its corporate designee, Mr. Bissonnette, who was one of the inventors of the ‘705 Patent, that

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Accordingly, Acushnet admits that the material formed by the conversion reaction is a cured product. Reliance on the inventor's testimony is proper in this instance, as the term "conversion reaction" is not clearly defined in the intrinsic record. As such, the testimony is helpful to help explain this technical term, as "[a]n inventor is a competent witness to explain the invention and what was intended to be conveyed by the specification and covered by the claims. *Voice Techs. Group, Inc. v. VMC Sys., Inc.*, 164 F.3d 605, 615 (Fed. Cir. 1999). Indeed a "large body of precedent... recognizes the value of the inventor's testimony. *Id.* at 615.

In contrast to Bridgestone's definition, Acushnet proffers that this term be afforded its "plain meaning." Provided that Acushnet's undefined "plain meaning" is that the material is a cured product, as it previously admitted, then Bridgestone accepts.

(ii) **"the material has a molecular weight of greater than about 200,000 and a resilience index of at least about 40"**

Bridgestone's construction of the term "the material has a molecular weight of greater than about 200,000 and a resilience index of at least 40" is that "'the material' refers to 'a material'

appearing earlier in the claim and discussed above, and that it is the material which has a molecular weight of greater than about 200,000 and a resilience index of at least about 40.” Thus, Bridgestone’s definition is intended simply to confirm that the two “materials” recited in claim 1 are the same.

The word “material” is recited twice in claim 1, first as “a material” and second as “the material.” According to the rules of claim construction, the recitation of “the material” refers back to “a material,” which is a cured product formed from the conversion reaction of at least a cis-to-trans catalyst and a polybutadiene. In other words, the recitation of “the material” finds antecedent basis under 35 U.S.C. §112 from the recitation of “a material.” See *Warner-Lambert Co. v. Apotex Corp.*, 316 F.3d 1348, 1356 (Fed. Cir. 2003).

In contrast, without explicitly stating so in their claim construction, Acushnet’s proposed construction of “plain meaning” seeks to establish a position that would allow them to argue that “the material” is an “uncured polybutadiene.” By opposing Bridgestone’s proposed construction, Acushnet is effectively asking the Court to redraft this term to allow the word “material” to include “uncured polybutadiene” because, according to Acushnet, it is the polybutadiene that is required to have a resilience index of greater than 40, not the material resulting from the conversion reaction.

In contrast to Claim 1, the Abstract of the ‘705 states: “[a] golf ball comprising a center comprising a polybutadiene having a molecular weight of greater than 200,000 and a resilience index of at least about 40...” But claim 1 states “[a] golf ball comprising: a center comprising a material farmed [*sic*] from the conversion reaction of at least a cis-to-trans catalyst and a polybutadiene, wherein the material has a molecular weight of greater than about 200,000 and a resilience index of at least about 40...” (*emphasis added*). Other portions of the specification also say that the material must have a resilience index of greater than 40. Ex. I, col. 12:28-30.

Acushnet seeks a construction – “plain meaning” – that would support an argument that a person of ordinary skill in the art would understand that the second occurrence of “material” actually means “polybutadiene.” But, this in effect asks this Court to correct what the patentee says is a drafting error – and should be rejected.

The Federal Circuit has expressly held that a Court may not rewrite the claim language. In *Chef America, Inc. v. Lamb-Weston, Inc.*, 358 F.3d 1371 (Fed. Cir. 2004), the Federal Circuit was faced with an issue where a patent claimed a process for producing a dough product. The claims required, *inter alia*, heating the dough “to” 400 to 850 degrees. The Federal Circuit refused to read “to” as “at” (*i.e.*, meaning heating the dough in an oven “at” the 400 to 850 degree range), as the plaintiff patentee proposed – even though baking dough “to” those temperatures burns it “to a crisp.”

The Federal Circuit reasoned:

These are ordinary, simple English words whose meaning is clear and unquestionable. There is no indication that their use in this particular conjunction changes their meaning. They mean exactly what they say. The dough is to be heated to the specified temperature. Nothing even remotely suggests that what is to be heated is not the dough but the air inside the oven in which the heating takes place. Indeed, the claim does not even refer to an oven.

Id. at 1373.

Thus, even if the effect of this construction would be “nonsensical,” the Federal Circuit has held that courts may not redraft patent claims, whether to make them operable or to sustain their validity.¹⁰ In other words, where a patent claim is susceptible to only one reasonable construction, the canons of claim construction are inapposite, and a court must construe the claims based on a patentee’s version of the claim as he himself drafted it. *Id.* at 1374. Courts are powerless to rewrite the claims, and must construe the language of the claim at issue based on the words used. *Hoganas AB v. Dresser Indus.*, 9 F.3d 948, 951 (Fed. Cir. 1993).

In view of the above, from the plain language of the claim, one of ordinary skill would have understood both instances of “material” as referring to the same cured reaction product of at least a *cis-to-trans* catalyst and a polybutadiene, and that it is the “material formed from the conversion reaction”

¹⁰ The ‘705 patent prosecution history further demonstrates that the patentee intended the “material” to have a resilience index of 40. Ex. W at p.7. Indeed, Applicants referred to “the resilience index of the center material.” *Id.* at p.9.

that must have a molecular weight of greater than about 200,000 and a resilience index of at least about 40.

(iii) “Resilience Index”

Bridgestone proposes that “resilience index” be construed, as defined in the specification, as “the difference in loss tangent measured at 10 cpm and 1000 cpm divided by 990 (the frequency span) multiplied by 100,000 (for normalization and unit convenience).” Ex. I, col. 11:13-16. Bridgestone looks to the specification of the ‘705 Patent for a definition of this term because “resilience index” was not known in the art prior to the ‘705 Patent, REDACTED

Acushnet seemingly agrees that a definition from the specification is necessary, because it proposes that “resilience index” be defined as “the difference in loss tangent measured at 10 cpm and 1000 cpm divided by 990 (the frequency span) multiplied by 100,000 (for normalization and unit convenience). The loss tangent is measured using an RPA 2000 manufactured by Alpha Technologies of Akron, Ohio. The RPA 2000 is set to sweep from 2.5 to 1000 cpm at a temperature of 100° C using an arc of 0.5 degrees. An average of six loss tangent measurements were acquired at each frequency and the average is used in calculation of the resilience index.” However, Acushnet alleges that more of the specification is needed to define the “resilience index” – particularly, the type of machine utilized to measure loss tangent, along with the specific settings used for that machine. Bridgestone disagrees with this proposed construction.

First, claim 1 simply recites a value for “resilience index.” Claim 1 does not specify any additional limitations to this term, such as what particular machine is used to measure this value. Second, the specification of the ‘705 Patent discloses:

As used herein the term "resilience index" is defined as the difference in loss tangent measured at 10 cpm and 1000 cpm divided by 990 (the frequency span) multiplied by 100,000 (for normalization and unit convenience). The loss tangent is measured using an RPA 2000 manufactured by Alpha Technologies of Akron, Ohio. The RPA 2000 is set to sweep from 2.5 to 1000 cpm at a temperature of 100.degree. C. using an arc of 0.5 degrees. An average of six loss tangent measurements

were acquired at each frequency and the average is used in calculation of the resilience index. The computation of resilience index is as follows:

$$\text{Resilience Index} = 100,000 \cdot [(\text{loss tangent@10 cpm}) - (\text{loss tangent@1000 cpm})] / 990$$

Ex. I, col. 11:13-26.

The first sentence and the equation both identically define “resilience index.” Neither of these definitions, nor any other portion of the ‘705 Patent, indicates in any way that the use of the RPA 2000 machine is critical or necessary to determine “resilience index.” Rather, the portion of the above cited section discussing the use of the RPA 2000 machine is nothing more than an exemplary embodiment of a way to measure “resilience index.” As such, it is improper to import such an exemplary embodiment into a claim construction. *Electro Scientific Indus.*, 307 F.3d at 1349.

In fact, there are many types of machines that can calculate the loss tangent of a rubber material (Ex. V, at pp.102:1-103:16), and one of ordinary skill would surely be aware of such machines, and not feel constrained to one particular measurement system exemplified in the ‘705 Patent.

Thus, Acushnet’s proposed construction is inconsistent with the specification and accepted rules of claim construction endorsed by the Federal Circuit.

V. CONCLUSION

The claim construction advanced by Bridgestone is well-grounded in the intrinsic evidence. In stark contrast, Acushnet largely ignores the intrinsic evidence in its proposed constructions and relies on unsupported definitions without regard to the context of the terms, both as they are used in the claims and described in the specification. Accordingly, the Court should adopt Bridgestone’s construction of the disputed claim terms in the patents-in-suit as set forth above, and reject Acushnet’s construction of those terms.

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